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# Globalisation and the Global Countryside: A Geovisual Narrative

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## Introduction

Globalisation transforms rural localities in ways that have diverse implications at multiple spatial scales. This occurs through changing global economic and political networks that trigger human movements, environmental degradation, justice and security of food, water and energy resources that are reflected globally, in and through rural communities. With globalisation being a multifaceted process, understanding its working for a global countryside<sup>1</sup> as the broader aim of this research requires the combination and interrogation of big and diverse empirical datasets that account for the global rural nature.

This research uses data in qualitative and quantitative forms, sourced from international and national data repositories, archives, literature reviews not originally designed for this research as well as interviews and ethnographic research conducted at case study locations. Given the complexity, diversity, volume and scale of these data, the future of GIS within the context of big data derived from multiple sources in multiple formats, lies not just in its capacity for storage, but potentially depends on the possibility to integrate, analyse, create and communicate public knowledge from spatial and non spatially referenced primary and secondary data as used in this research.

As part of the broader aim of the research as earlier outlined, the content of this poster is thus a preliminary and part effort using GIS to interrogate data from the diverse sources. It specifically focuses on migration and remittances patterns at global scale as well as transformations in a case study rural town - Newtown, Wales..

## Research Methods

We sourced quantitative global remittances and migration data from World Bank, OECD and UNHCR central data catalogs and household survey data on remittances and migration case specific to Nigeria, supplemented by organisation's web sites. For Newtown case study, we relied on qualitative data from census, archival records and reports dating back to the 19<sup>th</sup> century held at the National Library of Wales and a review of local historical literature. We employ the model in figure 1 in processing, analysing , interpreting and visualising the results.

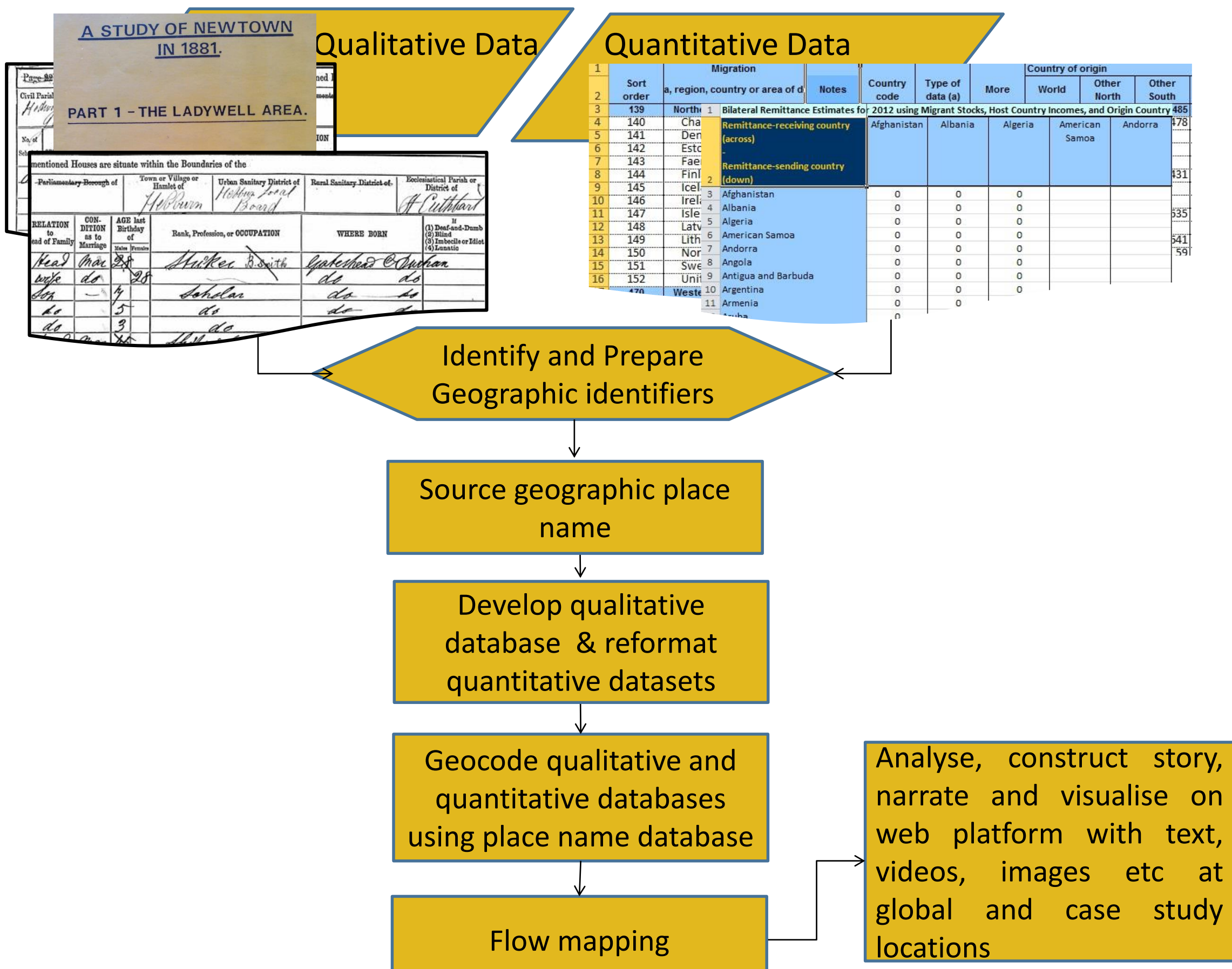


Figure 1: Conceptual Framework

## Global Migration and Remittance Flows

Figure 2 shows connectivities in global migration (forced and unforced) using flow mapping. It also shows top migrant origins and destinations with USA and Qatar as lead destinations in terms of numbers and percentage of population respectively. Mexico and West bank/Gaza are top sending countries for numbers and percentage of population respectively. Jordan remains a top destination for refugees and Mexico - USA has the busiest migration corridor accommodating over 11.6 millions migrants.

While patterns are noted, given the complexity and volume of this data set, readability can be compromised. To appreciate the context of these in and out flows and the local impact for both sending and receiving locations, the results are translated onto a web mapping platform for an interactive visualisation and better understanding of the linkages with other globalisation processes such as remittances as well as placed based narratives from rural places.

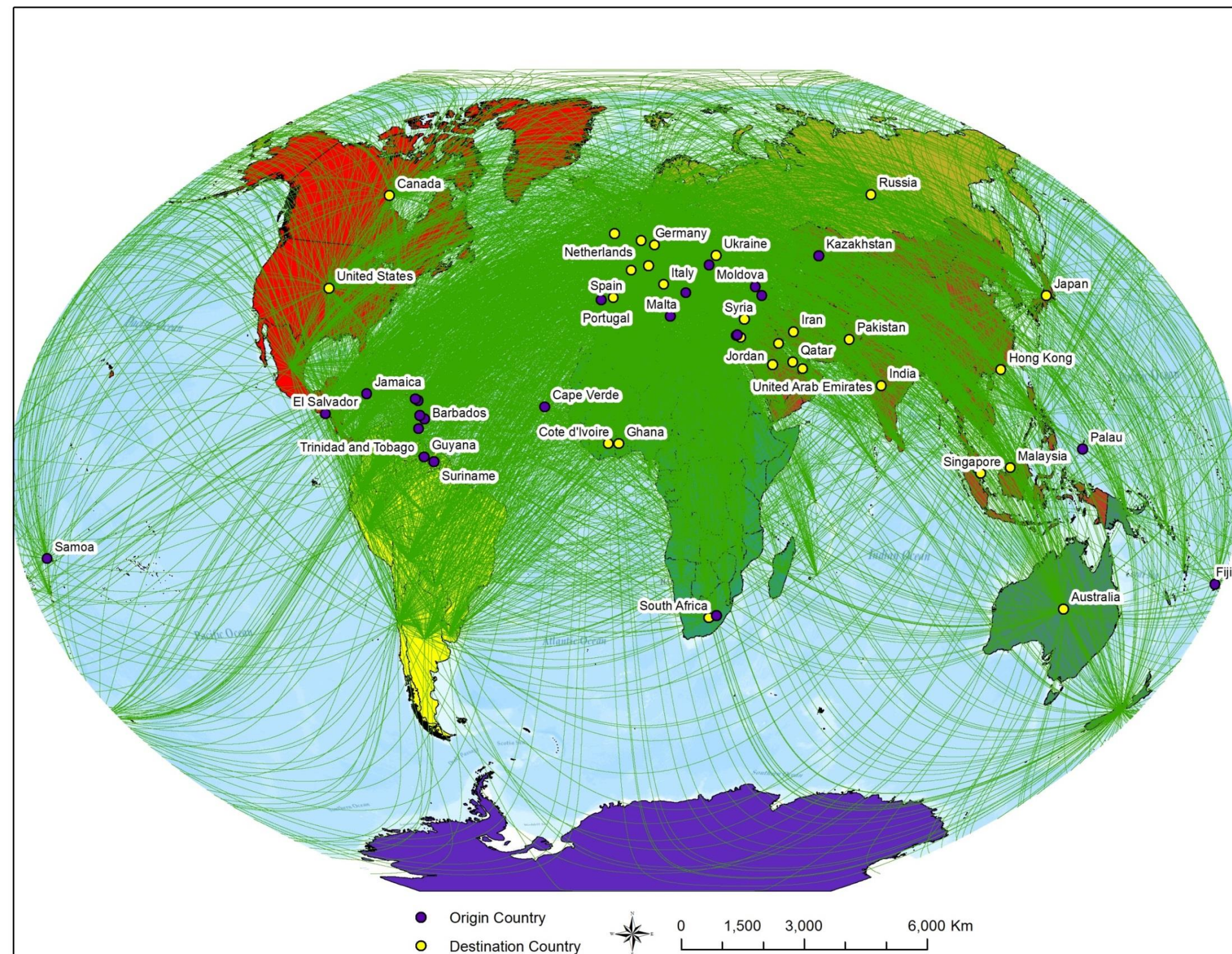


Figure 2: Global Migration Patterns

The figure 3 shows the pattern and volumes of global remittances flows to countries where it constitutes a large percentage of the GDP. Remittances represent small parts of migrants often labour migrants income and have been reported to be large and more resilient than other resource flows, triggering and sustaining development above other sources of capital in rural places of the receiving countries. Top remittance receiving and sending countries are India and USA respectively.



Figure 3: Volume of Top Global Remittance Flows

## Case study of Imo state, Nigeria

Figure 4 shows remittances patterns to Nigeria with USA being the largest sending country of remittances.

We look at how migration and remittances from USA have worked in and through two rural localities in Imo state, Nigeria as shown in figure 5 sample web mapping platform. Ideato North and Mbano have a long history of being places of engagement for USA residents with migration origins from these rural localities. This occurs through medical missions and established traditional festivals in the communities. The Ikeji festival (celebration of masquerades) in Arondizoug, Ideato North draws Nigerian-USA migrants, their families and friends to its celebration. Being a traditional and extensively celebrated annual spring event, it has triggered the establishment service centres of forex exchange bureaus, hotels and restaurants that serve the return migrants who participate not only in the celebration, but also its coordination. The Mbano Medical Mission through the Mbano National Assembly USA organise a yearly medical mission to Mbano. The mission is made up of Nigerian medical personnel and non Nigerian based in the USA. The mission provides medical equipment, transfer skills, general and specialist health care to the localities by working through the rural local health centres.

Migration comes with remittances and trigger developments in the rural localities with the localities becoming points of cultural, skills and knowledge exchange between migrant sending and receiving countries.

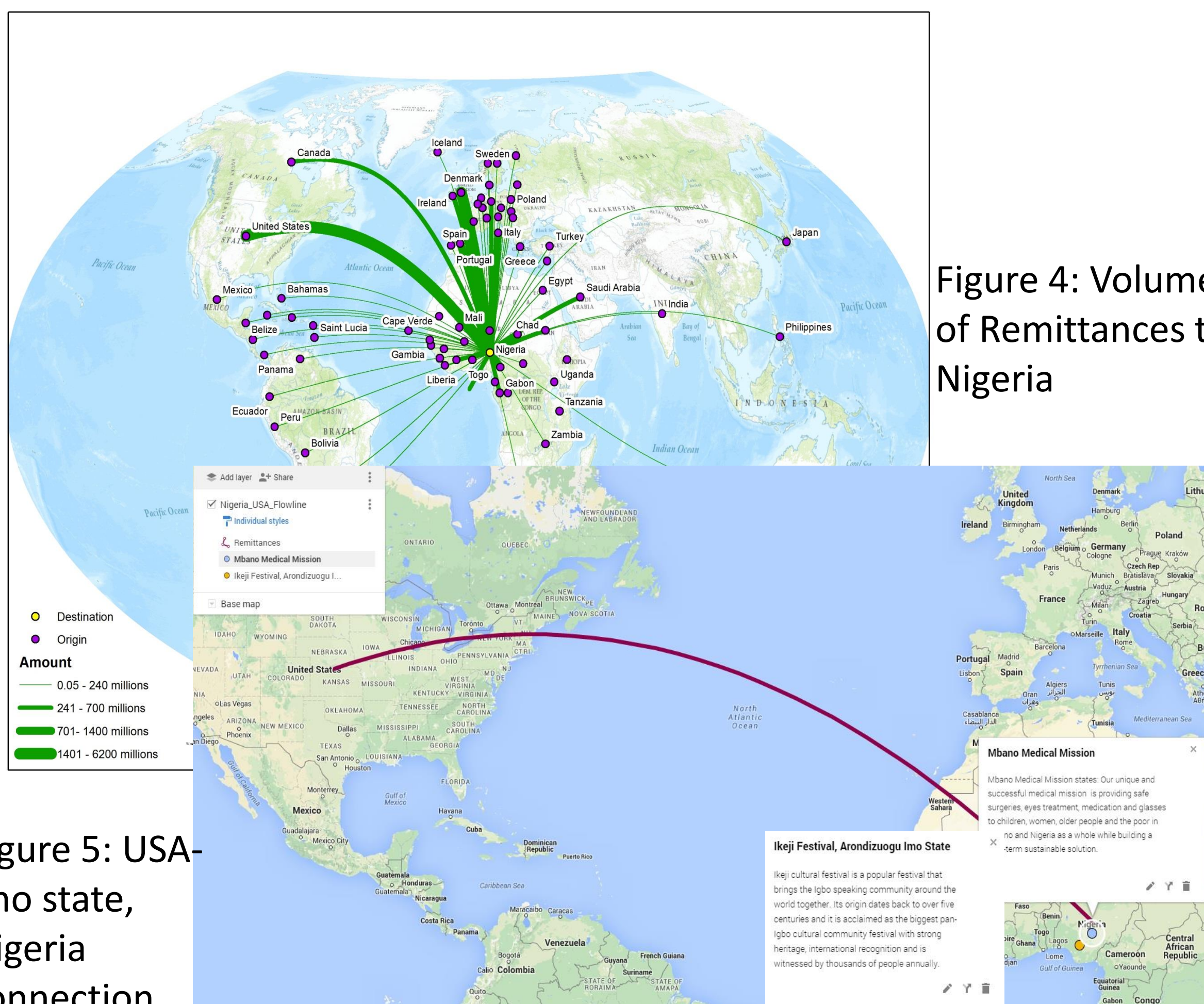


Figure 4: Volume of Remittances to Nigeria

Figure 5: USA-Imo state, Nigeria connection

## Case Study of Newtown, Wales

Figure 6 shows the origin of Newtown residents in the 19<sup>th</sup> century depicting its social relations and connections with the wider world and the historical influences that has configured the local identities and perceptions of place in the small rural town. The historical movement of people into and through Newtown influenced its development and triggered changes in the land use proposals of 1968 as shown in figure 6. These narrative stories

while presented here are hosted on a web platform to allow integration of contextual data sources and an interactive user experience.

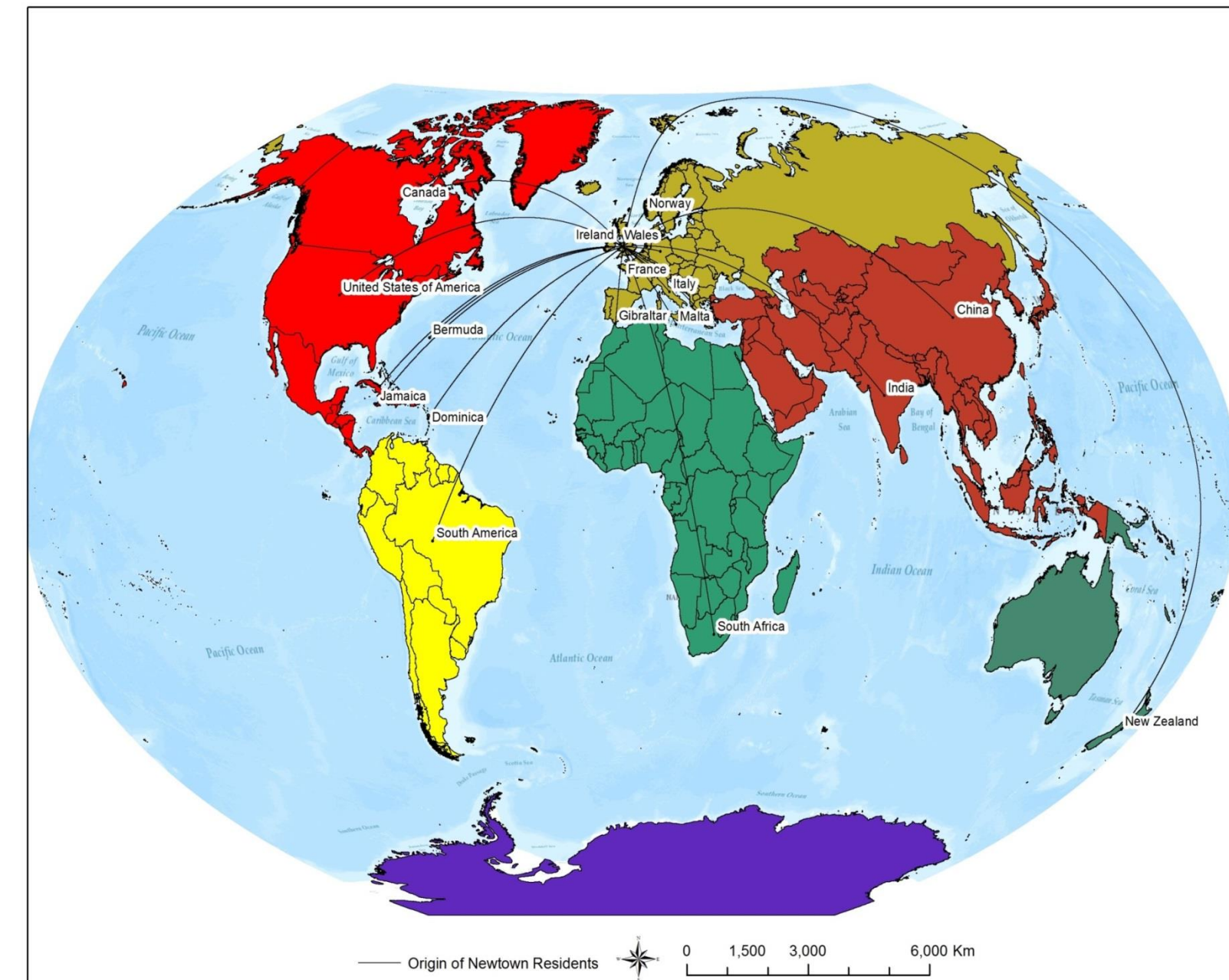


Figure 6: Origin of Newtown, Wales residents in 19<sup>th</sup> century

Figure 7 is a sample interactive web mapping of changes in the land use proposal of 1968 in Newtown, Wales. It integrates videos and pictures to construct narratives of the globalisation and development processes that have triggered these changes in the case study location.



Figure 7: Development and Changes in the Land use Proposal 1968 in Newtown, Wales

## Technical Challenges

Standards and interoperability across data sources is one main challenge of using big datasets derived from multiple sources. This has consequences for efficient, consistent & seamless geocoding of datasets.

## Conclusion

While big data provides an insight into the complexities of globalisation and the way it transforms rural places, integrating and analysing these data can be a challenge. The process of mapping and visualising the results can also undermine the potential in the datasets. This project will use ESRI ArcGIS Online web mapping platform to progress its research agenda.

## References

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